

Amendments to the Written Description of the Specification

Applicant presents replacement paragraphs below indicating the changes with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Please replace the last paragraph beginning at page 5, line 28 through page 6, line 7 with the amended paragraph as follows:

--An equation for b_0' is now generated using the constraint (1) and the parameterization technique ~~SO~~ so that:

$$b_0' = (\text{NOT } b_0 \text{ AND NOT } [b_0=1]) \text{ OR } (b_0 \text{ AND } [b_0=0])$$

$$= \text{NOT } b_0$$

Substituting this equation in constraint (2) gives:

$$b_1 \equiv (b_0 \text{ AND } b_1') \text{ OR } (\text{NOT } b_0 \text{ AND NOT } b_1') \text{ or, equivalently: } [[-]]$$

$$(b_1' \text{ AND } [b_0=b_1]) \text{ OR } (\text{NOT } b_1' \text{ AND NOT } [b_0=b_1])$$

By using this equation, an equation for b_1' can be generated by the parameterization technique, whereby:

$$b_1' = (\text{NOT } \underline{b_1} \text{ AND } [b_0=b_1]) \text{ OR } (b_1 \text{ AND } [b_0=b_1]) \text{ thus } b_1' = [b_0=b_1] \text{ --}$$

Please amend the equation on page 7, line 3 as follows:

$X[V:=E]$ substitutes the expressions E for the variables V in the predicate (X)

Please amend the paragraph on page 7, lines 10-17 as shown below

Let the state variables and transition functions of the machine be S and T (observation functions are not considered), then the reverse system is constructed as follows. First note that S' (the next-state variables of the reverse system) correspond to the previous states of the original system. Beginning with the transitions of the reverse system being T' , the transition functions of the original system are used to constrain them. Thus, for each state S and transition t , there is a constraint $S \xrightarrow{t} S'$. Call the set of constraints C . For each constraint, the parameterization E over the variables S' , is calculated and this is substituted in the transition functions and the remaining constraints.